CLAIMS

I claim:

1. A method for curing an UV curable product, article, ink coating or adhesive in or on a disk including the step of: causing relative rotational movement between an array of UV-LED chips mounted on a panel and a disk containing the UV curable product, article, ink coating or adhesive.

2. The method of claim 1, wherein the disk is rotated relative to a substantially fixed panel mounting an array of UV-LED chips.

3. The method of claim 1, wherein a panel mounting the array of UV-LED chips is rotated relative to the disk having the UV curable product, article, ink coating or adhesive therein or thereon.

4. The method of claim 1 including the step of arranging the UV-LED chips in an offset staggered array on at least one panel.

5. The method of claim 1 including the step of positioning a glass or plastic sheet or plate between the array of UV-LED chips and the disk to help protect the UV-LED chips from splatter of liquid containing UV photo initiators.

6. The method of claim 1 including the step of arranging an auxiliary array of UV-LED chips at the periphery of the disk for emitting UV light at the disk form a side of the disk.

7. The method of claim 6 including the step of arranging a glass or plastic sheet or plate between the array of UV-LED chips and the disk to help protect the UV-LED chips from splatter of liquid containing UV photo initiators.

8. An apparatus for applying UV light to UV photo initiators in an UV curable product, article, ink coating or adhesive in or on a disk-shaped product comprising:

at least one elongated panel mounting an array of UV-LED chips; and

a motor operatively associated with said panel for causing relative rotation between said panel and the disk-shaped product to be cured.

9. The apparatus of claim 8, comprising four elongated panels each containing an array of UV-LED chips, and said panels being arranged in a generally + pattern relative to the disk-shaped product to be cured.

10. The apparatus of claim 8, comprising a generally cylindrical pad for supporting the disk-shaped product, and said cylindrical pad being operatively connected to and rotated by said motor.

11. The apparatus of claim 10, wherein UV-LED chips are arranged in an offset staggered array on at least one panel.

12. The apparatus of claim 10, including a liquid dispensing device for dispensing a liquid having a photo initiator therein onto the surface of a rotating disk-shaped product at a point near the center of the disk so that centrifugal force causes the liquid to move radially, outwardly from the point of dispensing to an outer periphery of the disk-shaped product.

13. The apparatus of claim 10, wherein a glass or plastic sheet or plate is positioned between the array of UV-LED chips and the disk-shaped product to help protect the UV-LED chips from splatter of liquid containing UV photo initiators.

14. The apparatus of claim 8, comprising at least one generally horizontal panel positioned adjacent the disk-shaped, said horizontal panel being operatively connected to and rotated by said motor.

15. The apparatus of claim 14, wherein UV-LED chips are arranged in an offset staggered array on at least one panel.

16. The apparatus of claim 14, comprising four substantially horizontal panels containing an array of UV-LED chips, said horizontal panel being arranged in a generally cross-shaped pattern relative to the disk-shaped product to be cured.

17. The apparatus of claim 14, wherein a shield selected from the group consisting of a glass sheet, plastic sheet, and plate, is positioned between the array of UV-LED chips and the disk-shaped product to help protect the UV-LED chips from splatter of liquid containing UV photo initiators.

18. The apparatus of claim 14, wherein said motor comprises a shaft operatively connected to at least one panel containing the array of UV-LED chips adjacent a disk-shaped product.

19. The apparatus of claim 8, including an auxiliary array of UV-LED chips arranged at the periphery of the disk-shaped product for emitting UV light at the disk-shaped product from a side of the disk-shaped product.

20. The apparatus of claim 19, including a shield selected from the group consisting of a glass sheet, plastic sheet, and plate, positioned between the auxiliary array of UV-LED chips and the disk-shaped product to help protect the UV-LED chips from splatter of liquid containing UV photo initiators.